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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,895	06/26/2001	Casimer M. DeCusatis	FIS920010139US1(14569)	2475

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EXAMINER	
PHAN, HANH	

ART UNIT	PAPER NUMBER
2633	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/891,895	DECUSATIS ET AL.	
	Examiner	Art Unit	
	Hanh Phan	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 08/23/2004.

2. The indicated allowability of claims 1-10 is withdrawn in view of the newly discovered reference(s) to Epworth et al (US Patent No. 5,777,773), Kuo et al (US Patent No. 6,222,861) and Ackerman et al (US Patent No. 6,535,532). Rejections based on the newly cited reference(s) follow.

3. The second Terminal Disclaimer overcomes the double patenting rejection based on the 09/865,256 application have not received. Therefore, the double patenting rejection based on the 09/865,256 application is still maintained.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-44 of copending Application No. 09/865,256 (DeCusatis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-44 of copending Application No. 09/865,256 (DeCusatis et al).

Regarding claims 1-18, DeCusatis (copending Application No. 09/865,256) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1, 18 and 28-44 of DeCusatis).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. Claims 1-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 09/964,190 (DeCusatis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-20 of copending Application No. 09/964,190 (DeCusatis et al).

Regarding claims 1-18, DeCusatis (copending Application No. 09/964,190) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-4 of DeCusatis).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 1-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of

copending Application No. 09/975,266 (Jacobowitz et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-15 of copending Application No. 09/975,266 (Jacobowitz et al).

Regarding claims 1-18, Jacobowitz (copending Application No. 09/975,266) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center

wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-5 and 13 of Jacobowitz).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. Claims 1-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 09/963,258 (Jacobowitz et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-25 of copending Application No. 09/963,258 (Jacobowitz et al).

Regarding claims 1-18, DeCusatis (copending Application No. 09/963,258) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-14 of Jacobowitz).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Claims 1-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-32 of

copending Application No. 09/944,271 (Jacobowitz et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-32 of copending Application No. 09/944,271 (Jacobowitz et al).

Regarding claims 1-18, Jacobowitz (copending Application No. 09/944,271) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center

wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-5 and 11-13 of Jacobowitz).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Claims 1-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-26 of copending Application No. 09/893,125 (DeCusatis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-26 of copending Application No. 09/893,125 (DeCusatis et al).

Regarding claims 1-18, DeCusatis (copending Application No. 09/895,123) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-3 of DeCusatis).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

11. Claims 1-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of

copending Application No. 09/976,545 (DeCusatis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-17 of copending Application No. 09/976,545 (DeCusatis et al).

Regarding claims 1-18, DeCusatis (copending Application No. 09/976,545) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center

wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-3 of DeCusatis).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-38 of U.S. Patent No. 6,738,187 (DeCusatis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-38 of U.S. Patent No. 6,738,187 (DeCusatis et al).

Regarding claims 1-18, DeCusatis (U.S. Patent No. 6,738,187) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-8 of DeCusatis).

13. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 6,643,424 (Jacobowitz et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of

the instant application are encompassed by claims 1-17 of U.S. Patent No. 6,643,424 (Jacobowitz et al).

Regarding claims 1-18, Jacobowitz (U.S. Patent No. 6,643,424) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claim 1 of Jacobowitz).

14. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,751,014 (DeCusatis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-21 of U.S. Patent No. 6,751,014 (DeCusatis et al).

Regarding claims 1-18, DeCusatis (U.S. Patent No. 6,751,014) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said

dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-10 of DeCusatis).

15. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,724,786 (Jacobowitz et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-16 of U.S. Patent No. 6,724,786 (Jacobowitz et al).

Regarding claims 1-18, jacobowitz (U.S. Patent No. 6,724,786) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-7 of Jacobowitz).

16. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of U.S. Patent No. 6,674,936 (Jacobowitz et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of

the instant application are encompassed by claims 1-30 of U.S. Patent No. 6,674,936 (Jacobowitz et al).

Regarding claims 1-18, Jacobowitz (U.S. Patent No. 6,674,936) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-6 of Jacobowitz).

17. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,654,152 (Jacobowitz et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-21 of U.S. Patent No. 6,654,152 (Jacobowitz et al).

Regarding claims 1-18, Jacobowitz (U.S. Patent No. 6,654,152) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said

dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1, 10-13, 16, 17, 19 and 20 of Jacobowitz).

18. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of U.S. Patent No. 6,597,840 (Jacobowitz et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-30 of U.S. Patent No. 6,597,840 (Jacobowitz et al).

Regarding claims 1-18, Jacobowitz (U.S. Patent No. 6,597,840) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function

including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-7 of Jacobowitz).

19. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No.

6,816,517 (Jacobowitz et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-18 of the instant application are encompassed by claims 1-16 of U.S. Patent No. 6,816,517 (Jacobowitz et al).

Regarding claims 1-18, Jacobowitz (U.S. Patent No. 6,816,517) discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, said circuit comprising:

mechanism for applying a dither modulation signal at a dither modulation frequency to said electromagnetic signal, and inputting said dither modulated electromagnetic signal to said wavelength selective device; and

a feedback loop including

mechanism for converting a portion of said dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing said feedback signal with said dither modulation signal and generating an error signal representing a difference between a frequency characteristic of said feedback signal and a dither modulation frequency,

mechanism for applying said error signal to better align the center wavelengths of the electromagnetic signal and the wavelength selective device, wherein said center wavelength of said electromagnetic signal and said wavelength selective

device center wavelength become aligned when said frequency characteristic of said feedback signal is two times said dither modulation frequency, and

mechanism to selectively prevent said error signal from being applied to better align said center wavelengths (see claims 1-4 of Jacobowitz).

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

21. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epworth et al (US Patent No. 5,777,773) in view of Kuo et al (US Patent No. 6,222,861) and further in view of Ackerman et al (US Patent No. 6,535,532).

Regarding claims 1 and 6, referring to Figures 1, 2 and 5-9, Epworth discloses a control circuit for dispersion control of electromagnetic signals in communication networks by aligning an electromagnetic signal having a peaked spectrum function including a center wavelength and a wavelength selective device implementing a peaked passband function including a center wavelength, the circuit comprising:

mechanism for applying a dither modulation signal (i.e., dither modulation signal, Fig. 1) at a dither modulation frequency to the electromagnetic signal, and inputting the dither modulated electromagnetic signal to the wavelength selective device (i.e., filter 3, Fig. 1); and

a feedback loop (Fig. 1) including

mechanism for converting (i.e., optical to electrical converter 4, Fig. 1) a portion of the dither modulated electromagnetic signal to an electric feedback signal,

mechanism for continuously comparing (i.e., comparator 5, Fig. 1) the feedback signal with the dither modulation signal and generating an error signal representing a difference between a frequency characteristic of the feedback signal and a dither modulation frequency,

mechanism for applying the error signal to better align the center wavelengths of the electromagnetic signal (i.e., laser 1, Fig. 1) and the wavelength selective device (i.e., filter 3, Fig. 1), wherein the center wavelength of the electromagnetic signal and the wavelength selective device center wavelength become aligned (col. 1, lines 61-67, col. 2, lines 1-32 and col. 7, lines 5-43).

Epworth differs from claims 1 and 6 in that he does not specifically teach the frequency characteristic of the feedback signal is two times the dither modulation frequency and mechanism to selectively prevent the error signal from being applied to better align the center wavelengths. Epworth teaches the control means 7 (Figs. 1 and 5) is operable to adjust the frequency of the laser so as to reduce the error towards zero or a predetermined value (col. 7, lines 17-20).

However, Kuo in US Patent No. 6,222,861 teaches the amount of deviation in wavelength or frequency is determined by the amplitude of the dither signal. The rate of the deviation is determined by frequency of the dither signal (col. 6, lines 9-18 and col. 5, lines 30-64). Although Kuo does not specifically teach the frequency characteristic of

the feedback signal is two times the dither modulation frequency. However, it would have been obvious to obtain the frequency characteristic of the feedback signal is two times the dither modulation frequency in order to maintain the wavelength at the specified wavelength.

Ackerman in US Patent No. 6,535,532 teaches mechanism to selectively prevent the error signal from being applied to better align the center wavelengths (Figs. 3 and 4, col. 4, lines 1-67 and col. 5, lines 1-47).

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the frequency characteristic of the feedback signal is two times the dither modulation frequency and mechanism to selectively prevent the error signal from being applied to better align the center wavelengths as taught by Kuo and Ackerman in the system of Epworth. One of ordinary skill in the art would have been motivated to do this since Kuo suggests in column col. 6, lines 9-18 and col. 5, lines 30-64 and Ackerman suggests in column 4, lines 1-67 and col. 5, lines 1-47 using such the frequency characteristic of the feedback signal is two times the dither modulation frequency and mechanism to selectively prevent the error signal from being applied to better align the center wavelengths have advantage of allowing maintaining the wavelength at the specified wavelength.

Regarding claims 2 and 7, the combination of Epworth, Kuo and Ackerman teaches wherein the mechanism to selectively prevent the error signal from being applied includes mechanism to prevent the error signal from being applied at defined times (col. 4 of Ackerman, lines 1-67 and col. 5, lines 1-47).

Regarding claims 3 and 8, the combination of Epworth, Kuo and Ackerman teaches for use with a system that receives and transmits the electromagnetic signal, and wherein the system and the control circuit are initialized and re-initialized at defined times and wherein the mechanism to selectively prevent the error signal from being applied includes mechanism to allow the error signal to be applied to better align the center wavelengths only at the defined times (col. 4 of Ackerman, lines 1-67 and col. 5, lines 1-47).

Regarding claims 4 and 9, the combination of Epworth, Kuo and Ackerman teaches wherein the mechanism to selectively prevent the error signal from being applied includes mechanism to disable the feedback loop at defined times (col. 4 of Ackerman, lines 1-67 and col. 5, lines 1-47).

Regarding claims 5 and 10, the combination of Epworth, Kuo and Ackerman teaches wherein the electromagnetic signal is laser signal having a wavelength between 1300nm and 1550nm (col. 7 of Kuo, lines 60-67 and col. 8, lines 1-6).

Allowable Subject Matter

22. Claims 11-18 are allowed.

Response to Arguments

23. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

HANH PHAN
PRIMARY EXAMINER